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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,785	01/25/2002	Yoshiaki Kobayashi	843.41117 X00	8401

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EXAMINER

FOX, CHARLES A

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,785

Applicant(s)

KOBAYASHI ET AL. *ch*

Examiner

Charles A. Fox

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

Information Disclosure Statement

The information disclosure statement filed August 29, 2002 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, the information referred to therein has been considered by the examiner, but will not be listed unless placed on the notice of references cited by examiner.

Specification

The abstract of the disclosure is objected to because it is more than one paragraph and contains more than 150 words. Correction is required. See MPEP § 608.01(b).

The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully. Examples of some unclear, inexact or verbose terms used in the specification are:

on page six lines 17 and 18 the slider (111) does not bring the opener (120) into contact with the container, rather the slider moves the container into contact with said opener;

on page 7 line 17 and other places in the disclosure the word "cum" is used, the examiner believes that the word "cam" is more appropriate;

on page 10 line 12 the phrase 'becomes negative pressure...' is not proper English;

figure 5 and page 10 are not in agreement as to the maximum velocity shown in the figure.

These are just a few examples of mistakes in the specification, applicant is advised to carefully reread the specification and make any changes needed to correct any and all deficiencies they may find.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacchi et al. In regards to claim 1 Bacchi et al. US 6,281,561 teaches a semiconductor container opening and closing device comprising:

a stage (24) for placing a semiconductor carrier;

a connection portion (74) for connecting said carrier with an opening of a semiconductor process device;

an opener (76) for holding a lid of said carrier, and then opening and closing said container in a direction vertical to the carrier;

an opener elevator mechanism (28) for moving the opener (76) in a vertical direction to open and close the semiconductor carrier and the port to the process device.

Furthermore applicant has proven the rate of deposit of debris on a wafer is dependent upon a pressure differential and the speed of opening a wafer cassette. This formula developed by the applicant is therefore treated as a natural phenomena that

would be known by anyone of ordinary skill in the art. Whether the formula was in fact known or unknown at the time of the claimed invention; it is one of the "basic tools of the scientific and technological work", and is treated as if it were a familiar part of the prior art. See *Parker v. Flook*, 437 U.S. 584, 196 USPQ 193,198 and *Gotschalk v. Benson*, 409 U.S. 67, 175 USPQ 674.

Bacchi does not teach any specific speed for opening the carrier door, however based upon the design constraints of the system and the knowledge of the rate of deposit of debris as discussed above it would have been obvious to one of ordinary skill in the art, at the time of invention to choose a speed for opening the wafer carrier that allows the wafers to remain above a predetermined level of cleanliness based upon the pressure differentials between the process device and the ambient air.

In regards to claim 4 Bacchi et al. teaches a method of manufacturing semiconductors comprising the steps of:

- placing a wafer in a carrier;
- moving the carriers between process devices;
- connecting an opening of said container with an opening of a process device;
- processing the wafers carried by said carrier.

Bacchi does not teach any specific method for determining the speed for opening the carrier door, however based upon the design constraints of the system and the knowledge of the rate of deposit of debris as discussed above it would have been obvious to one of ordinary skill in the art, at the time of invention to choose a speed for opening the wafer carrier that allows the wafers to remain above a predetermined level

of cleanliness based upon the pressure differentials between the process device and the ambient air.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacchi et al. and further in view of Bonora et al. Bacchi et al. teaches a device for opening and closing semiconductor carriers, comprising:

- a stage (24) for placing a semiconductor carrier;

- a connection portion (74) for connecting said carrier with an opening of a semiconductor process device;

- an opener (76) for holding a lid of said carrier, and then opening and closing said container in a direction vertical to the carrier;

- an opener elevator mechanism (28) for moving the opener (76) in a vertical direction to open and close the semiconductor carrier and the port to the process device;

- a cover (26) for covering the opener elevation assembly.

Bacchi et al. do not teach an opening at the bottom of said cover. Bonora et al. US 6,220,808 teaches a device for opening and closing wafer carriers comprising :

- an elevatable door (28) for opening and closing a wafer carrier (34);

- a cover for said elevatable mechanism;

- an opening located in the bottom of said cover;

- a fan in said opening for moving a fluid through said opening.

It would have been obvious to one of ordinary skill in the art, at the time of invention to provide an opening and a fan as taught by Bonora et al. in the cover of the device


taught by Bacchi et al. in order to maintain the cleanliness level desired for the wafers being handled by the system.

The prior art made of record and not relied upon, but considered pertinent to applicant's disclosure is: Nering et al. 2000, Tseng et al. 2000, Adair, Jr. 2001 Sasaki et al. 2001, Yoshioka et al. 2002 and Leng 2003.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Fox whose telephone number is 703-605-4294. The examiner can normally be reached between 7:00-5:00 Monday, Tuesday, Thursday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached at 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.


EILEEN D. LILLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

CAF
CAF
8-24-03